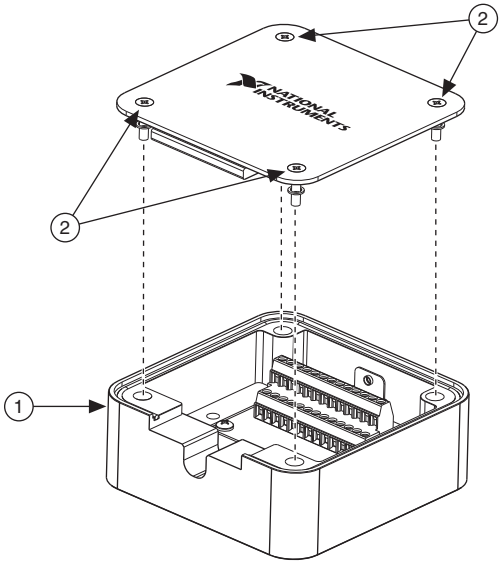
USER GUIDE

SCB-19

19-Pin Shielded Desktop Connector Block

This document describes how to connect and use the SCB-19 with the AUX I/O front panel connector on your National Instruments device. Figure 1 shows the parts of the SCB-19 connector block.

Figure 1. SCB-19 Connector Block



1	SCB-19	2	Cover Screws

Required Supplies

In addition to the SCB-19 kit, you need the following supplies to connect and use your SCB-19 with your NI device:

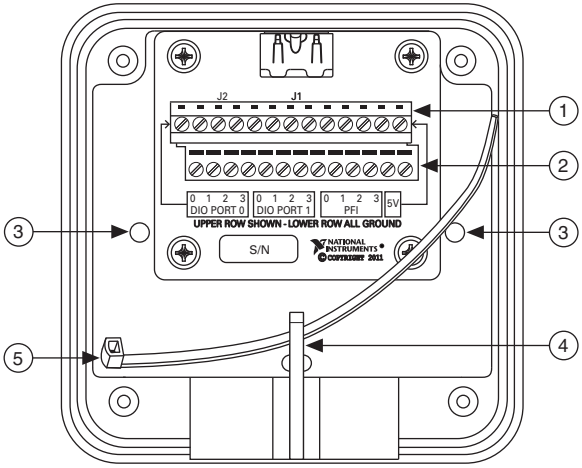
- ☐ NI FlexRIO adapter module or other NI device with compatible 19-pin AUX I/O front panel connector
- ☐ SHH19–H19–AUX cable assembly (NI part number 152629-0*x*)
- ☐ Phillips #1 screwdriver
- ☐ 0.125 in. flathead screwdriver
- ☐ Shielded, multiconductor cable with 14–30 AWG wire
- ☐ Wire cutters
- ☐ Wire insulation stripper

Note These supplies are not included in the SCB-19 kit. You must purchase these items separately.

Screw Terminal Diagram

Figure 2 shows the interior of the SCB-19, including the screw terminals and their corresponding signals.

Figure 2. Interior of the SCB-19



1 DIO and PFI Screw Terminals
2 Ground Terminals
3 Wall Mounting Screw Holes
4 Cable Tie Loops
5 Cable Tie

Getting Started with the SCB-19

Complete the following steps to connect and use your SCB-19 with your NI device.

1. Install your NI device in your chassis. Refer to your device documentation for installation instructions.
2. Remove the four cover screws with a Phillips #1 screwdriver and open the top cover, as shown in Figure 1.
3. Connect wires to the screw terminals by stripping 6.35 mm (0.25 in.) of insulation, inserting the wires into the screw terminals, and securely tightening the screws with the flathead screwdriver to a torque of 0.5 N · m to 0.6 N · m (4.43 lb · in. to 5.31 lb · in.).

Caution To ensure the EMC performance specified for the connected device, any wires connected to screw terminals that exit the enclosure must be shielded. NI recommends using a multiconductor cable with an overall shield. Terminate the cable shield to one of the PCB mounting screws.

Note The top row of screw terminals corresponds to the DIO and PFI signals on the AUX I/O front panel connector. The bottom row provides ground terminals.

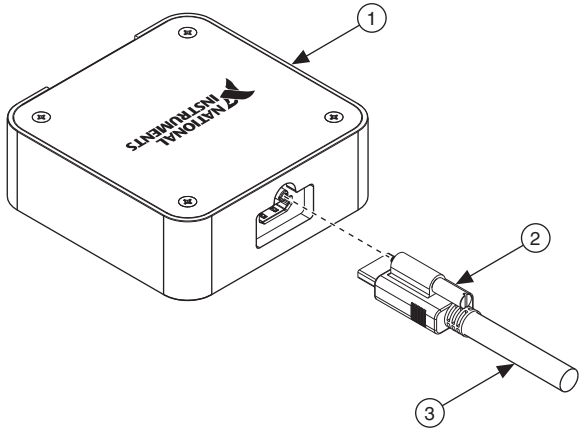
Tip You can neaten the wires and provide mechanical support by sliding a cable tie through one of the slots shown in Figure 2, wrapping the cable tie around the wires, and tightening the cable tie.

4. Close the top cover and tighten the four cover screws.

Caution Refer to your device documentation for maximum voltage specifications. Using voltages outside of the specified range could damage the SCB-19 and any devices connected to it. NI is *not* liable for any damage resulting from using voltages outside of the recommended range.

5. Connect the SCB-19 to the AUX I/O front panel connector on your NI device using an SHH19–H19–AUX cable (NI part number 152629-0*x*) and tighten the target screw, as shown in Figure 3.

Figure 3. SCB-19 Cable Connection



1 SCB-19
2 Target Screw
3 SHH19–H19–AUX Cable Assembly

Caution Although the AUX I/O front panel connector accepts a standard HDMI cable, a standard HDMI cable causes significant crosstalk between some channels. Use the SHH19–H19–AUX cable to minimize crosstalk.

When you have finished using the SCB-19, power off any external signals connected to the SCB-19 before you power off your computer.

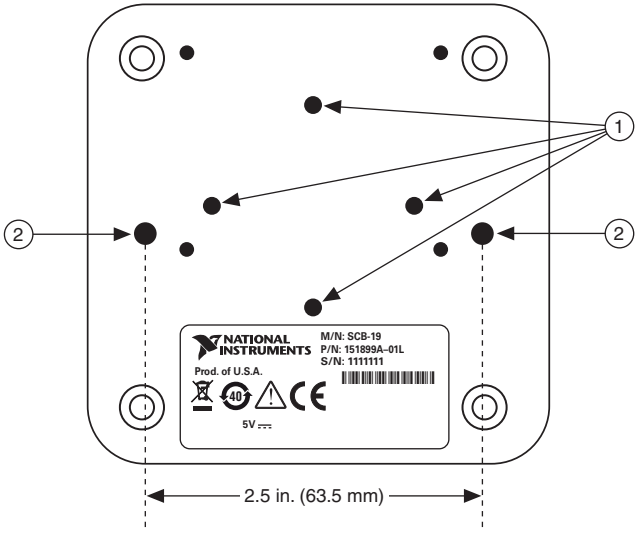
SCB-19 Mounting Holes

You can mount the SCB-19, either vertically or horizontally, on a DIN rail in an industrial environment. You can purchase a compatible DIN rail kit from NI using the part number 781740-01.

The SCB-19 also has two screw holes for a generic wall mount. These wall mount holes are designed for use with a #4 or #6 panhead screw with a minimum length of 0.625 in. (15.88 mm).

Figure 4 shows the screw holes locations on the bottom of the SCB-19.

Figure 4. SCB-19 Mounting Screw Holes



1	DIN Rail Mounting Screw Holes	2	Wall Mounting Screw Holes

Specifications

Physical

Dimensions ..... 8.7 × 8.7 × 3.1 cm
(3.4 × 3.4 × 1.2 in.)

Weight ..... 355 g (12.5 oz)

Connectors ..... H19 and screw terminals

Environmental

Operating environment ..... 0 °C to 55 °C,
in accordance with IEC-60068-2-1 and
IEC-60068-2-2.

Relative humidity range ..... 10% to 90%, noncondensing,
in accordance with IEC-60068-2-56.

Pollution Degree 2

Altitude ..... 2,000 m

Indoor use only.

Storage environment

- Ambient temperature range ..... –20 °C to 70 °C,
  in accordance with IEC-60068-2-1 and
  IEC-60068-2-2.
- Relative humidity range ..... 5% to 95%, noncondensing,
  in accordance with IEC-60068-2-56.

Note Clean the device with a soft, non-metallic brush. Make sure that the device is completely dry and free from contaminants before returning it to service.

Shock and Vibration

Operational shock ..... 30 g peak, half-sine, 11 ms pulse,
in accordance with IEC-60068-2-27.
Test profile developed in accordance with
MIL-PRF-28800F.

Random vibration

- Operating ..... 5 Hz to 500 Hz, 0.3 g_{rms}
- Nonoperating ..... 5 Hz to 500 Hz, 2.4 g_{rms},
  in accordance with IEC-60068-2-64.
  Nonoperating test profile exceeds the
  requirements of MIL-PRF-28800F, Class 3.

Safety

This product meets the requirements of the following standards of safety for electrical equipment for measurement, control, and laboratory use:

- IEC 61010-1, EN 61010-1
- UL 61010-1, CSA 61010-1

Note For UL and other safety certifications, refer to the product label or the *Online Product Certification* section.

CE Compliance CE

This product meets the essential requirements of applicable European Directives as follows:

- 2006/95/EC; Low-Voltage Directive (safety)
- 2004/108/EC; Electromagnetic Compatibility Directive (EMC)

Online Product Certification

To obtain product certifications and the Declaration of Conformity for this product, visit `ni.com/certification`, search by model number or product line, and click the appropriate link in the Certification column.

Environmental Management

NI is committed to designing and manufacturing products in an environmentally responsible manner. NI recognizes that eliminating certain hazardous substances from our products is beneficial to the environment and to NI customers.

For additional environmental information, refer to the *NI and the Environment* Web page at `ni.com/environment`. This page contains the environmental regulations and directives with which NI complies, as well as other environmental information not included in this document.

Waste Electrical and Electronic Equipment (WEEE)

EU Customers At the end of the product life cycle, all products *must* be sent to a WEEE recycling center. For more information about WEEE recycling centers, National Instruments WEEE initiatives, and compliance with WEEE Directive 2002/96/EC on Waste and Electronic Equipment, visit `ni.com/environment/weee`.

电子信息产品污染控制管理办法 （中国 RoHS）

中国客户 National Instruments 符合中国电子信息产品中限制使用某些有害物质指令 (RoHS)。关于 National Instruments 中国 RoHS 合规性信息，请登录 `ni.com/environment/rohs_china`。 (For information about China RoHS compliance, go to `ni.com/environment/rohs_china`.)

Where to Go for Support

The National Instruments website is your complete resource for technical support. At `ni.com/support` you have access to everything from troubleshooting and application development self-help resources to email and phone assistance from NI Application Engineers.

National Instruments corporate headquarters is located at 11500 North Mopac Expressway, Austin, Texas, 78759-3504. National Instruments also has offices located around the world to help address your support needs. For telephone support in the United States, create your service request at `ni.com/support` and follow the calling instructions or dial 512 795 8248. For telephone support outside the United States, visit the Worldwide Offices section of `ni.com/niglobal` to access the branch office websites, which provide up-to-date contact information, support phone numbers, email addresses, and current events.

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